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Permit No. WA0038598

Issuance Date: _____
Effective Date: November 1, 2009
Expiration Date: June 30, 2014

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT No. WA0038598**

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1342 et seq.

**Fleischmann's Vinegar Company, Inc.
P.O. Box 488
Sumner, WA 98390**

is authorized to discharge in accordance with the Special and General Conditions that follow.

<u>Facility Location:</u> 1115 Zehnder Street Sumner, WA 98390	<u>Receiving Water:</u> White River
<u>Industry Type:</u> Manufacturer of vinegar (SIC Code 2099)	<u>Discharge Location:</u> Outfall 001: City of Sumner sanitary sewer Latitude: 47° 12' 33" N Longitude: 122° 14' 27" W Outfall 002: White River Latitude: 47° 12' 35" N Longitude: 122° 14' 34" W

is authorized to discharge in accordance with the special and general conditions which follow.

Garin Schrieve, P.E.
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A	Discharge Monitoring Report	Monthly	December 15, 2009
S3.E	Reporting Permit Violations	As necessary	
S3.F	Other Reporting	As necessary	
S4.A	Operations and Maintenance Manual	1/permit cycle	March 1, 2010
S4.A	Operations and Maintenance Manual Update or Review Confirmation Letter	Annually	January 2, 2011
S4.A	Revised O&M Manual	1/permit cycle	June 15, 2014
S4.B	Reporting Bypasses	As necessary	
S4.F.	Reporting Other Information	As necessary	
S5.C	Solid Waste Control Plan	1/permit cycle	March 1, 2010
S5.C	Updated Solid Waste Control Plan	Within 30 days of making any changes to the Plan	
S6	Updated Spill Plan	Within 30 days of making any changes to the Plan	
S6	Spill Plan	1/permit cycle, if no updates were made	January 2, 2013
S8.A	Temperature Monitoring Quality Assurance Project Plan	1/permit cycle	March 1, 2010
S8.H	Receiving Water and Effluent Temperature Data	Annually	December 31, 2010
S9.	Engineering Report	1/permit cycle	June 30, 2013
S9.	Plans and Specifications	1/permit cycle	December 31, 2013
S10.	Mixing Zone Study Plan (if necessary)	1/permit cycle	March 1, 2013
S10.	Mixing Zone Study (if necessary)	1/permit cycle	June 30, 2013
S11.	Application for Permit Renewal	1/permit cycle	January 2, 2013
G1.C.	Notice of Change in Authorization	As necessary	
G4.	Permit Application for Substantive Changes to the Discharge	As necessary	

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Permit Section	Submittal	Frequency	First Submittal Date
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7	Notice of Permit Transfer	As necessary	
G10	Duty to Provide Information	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITS

A. Process Wastewater Discharges

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge non-contact cooling water at the permitted location subject to complying with the following limits:

EFFLUENT LIMITS: OUTFALL # 002 TO THE WHITE RIVER		
Parameter	Average Monthly ^a	Maximum Daily ^b
Flow, MGD	0.58	0.58
Ammonia, mg/L	0.81	0.81
Ammonia, lbs/day	3.9	3.9
Temperature, °C	25.5 (77.9 °F)	23.3 (74.0°F)
pH, s.u. ^c	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0	
^a Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.		
^b Maximum daily effluent limit means the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day. This does not apply to pH.		
^c Indicates the range of permitted values. The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.		

B. Outfall #002 Mixing Zone Authorization

The previously authorized temporary acute and chronic mixing zones for Outfall #002 have been reauthorized. **These mixing zones will not be renewed when the new permit is renewed.** Fleischmann's Vinegar must conduct a new Mixing Zone Study to provide a basis for Department of Ecology (Ecology) to establish new mixing zones in compliance with Water Quality Standards. The maximum boundaries of the temporary mixing zones in the White River for Outfall #002 are defined below:

Chronic Mixing Zone

The maximum size of the mixing zone (chronic exceedance) is approximately 300 feet downstream of the diffuser and 100 feet upstream of the diffuser. The chronic dilution factor 300 feet downstream of the diffuser is 39.

Acute Mixing Zone

The acute dilution factor 30 feet downstream of the diffuser is 5.

C. Municipal Sewer System Discharges

During the period beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to discharge process wastewater consisting of vinegar foam, filtration wash water, and tank wash water to the city of Sumner sewer system subject to the following limits:

EFFLUENT LIMITS: OUTFALL # 001 TO CITY OF SUMNER WWTP		
Parameter	Average Monthly ^a	Maximum Daily ^b
Flow, gpd	12,000	12,000
BOD ₅ , mg/L	1,418	1,418
BOD ₅ , lbs/day	142	142
TSS, mg/L	4,500	4,500
TSS, lbs/day	450	450
pH, s.u. ^c	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0	
^a Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.		
^b Maximum daily effluent limit means the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day. This does not apply to pH.		
^c Indicates the range of permitted values. The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.		

S2. MONITORING REQUIREMENTS**A. Monitoring Schedule**

The Permittee must monitor in accordance with the following schedule and must use the laboratory method, detection level (DL), and quantitation level (QL) specified in Appendix A.

Parameter	Units	Minimum Sampling Frequency	Sample Type
(1) Outfall #002 Effluent to the White River—Non-Contact Cooling Water			
Flow	MGD	Continuous ^a	Metered
BOD ₅	mg/L	Monthly ^b	Grab ^c
BOD ₅	lbs/day ^d	Monthly ^b	Grab ^c
Ammonia	mg/L	Monthly	Grab ^c

Parameter	Units	Minimum Sampling Frequency	Sample Type
Ammonia	lbs/day ^d .	Monthly	Grab ^c .
pH	Standard Units	Monthly	Grab ^c .
Temperature ^e .	Degrees C	Continuous ^a .	Metered
(2) Outfall #001 Effluent to the city of Sumner WWTP—Process Wastewater			
Flow	gpd	Per Batch Discharged	Metered or Estimated
BOD ₅	mg/L	Monthly	Grab ^c .
BOD ₅	lbs/day ^d .	Monthly	Grab ^c .
TSS	mg/L	Monthly	Grab ^c .
TSS	lbs/day ^d .	Monthly	Grab ^c .
pH	Standard Units	Monthly	Grab ^c .
(3) White River—Upstream from Outfall #001			
Temperature ^e .	Degrees C	Continuous ^a .	Metered
(4) Receiving Water Temperature Study			
As specified in section S8.			
Table Footnotes			
^a . Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance.			
^b . BOD ₅ must be monitored for Outfall #002 for a period of 24 months. This data will be used to assess whether or not BOD ₅ is a parameter of concern.			
^c . Grab means an individual, discrete sample.			
^d . To calculate discharge amount in lbs/day, use the following formula: Concentration (in mg/L) X Flow (in MGD) X Conversion Factor (8.34) = Discharge Amount (in lbs/day).			
^e . The Permittee must determine and report a daily maximum from half-hour measurements in a 24-hour period. To determine the daily average, use the temperature on the half-hour from the chart for the 24-hour period and calculate the average of the values. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees C and the Permittee must verify accuracy annually.			

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit must represent the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 Code of Federal Regulations (CFR) Part 136.

C. Flow Measurement, Field Measurement and Continuous Monitoring Devices

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.

2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard and the manufacturer's recommendation for that type of device.
3. If the Permittee uses micro-recording temperature devices known as thermistors it must calibrate the devices using protocols from Ecology's Quality Assurance Project Plan Development Tool (*Continuous Temperature Sampling Protocols for the Environmental Monitoring and Trends*). This document is available online at <http://www.ecy.wa.gov/programs/eap/qa/docs/QAPPtool/Mod6%20Ecology%20SOPs/Protocols/ContinuousTemperatureSampling.pdf>. Calibration as specified in this document is not required if the Permittee uses recording devices which are certified by the manufacturer.
4. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
5. Calibrate these devices at the frequency recommended by the manufacturer.
6. Calibrate flow monitoring devices at a minimum frequency of at least one calibration per year.
7. Maintain calibration records for at least three years.

D. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by Ecology is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 Washington Administrative Code (WAC), Accreditation of Environmental Laboratories. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee must monitor and report in accordance with the following conditions. The falsification of information submitted to Ecology is a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. The Permittee must:

1. Submit monitoring results each month.
2. Summarize, report, and submit monitoring data obtained during each monitoring period on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by Ecology.
3. Submit DMR forms monthly whether or not the facility was discharging. If the facility did not discharge during a given monitoring period, submit the form as

required with the words "NO DISCHARGE" entered in place of the monitoring results.

4. Ensure that DMR forms are postmarked or received by Ecology no later than the 15th day of the month following the completed monitoring period, unless otherwise specified in this permit.
5. Send report(s) to Ecology at:

Industrial Unit Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

All laboratory reports providing data for organic and metal parameters must include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL) or laboratory quantitation limit (QL or ML), reporting units, and concentration detected. Analytical results from samples sent to a contract laboratory must have information on the chain of custody, the analytical method, QA/QC results, and documentation of accreditation for the parameter.

B. Records Retention

The Permittee must retain records of all monitoring information for a minimum of three years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

C. Recording of Results

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement.
2. The individual who performed the sampling or measurement.
3. The dates the analyses were performed.
4. The individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by Condition S2. of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

- a. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.
- b. If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within 30 days of sampling.

1. Immediate Reporting

The Permittee must report any failure of the disinfection system immediately to the Department of Ecology's Regional Office 24-hour number listed below:

Southwest Regional Office 360-407-6300

The Permittee must report any failure of the disinfection system, any collection system overflows, or any plant bypass discharging to a waterbody used as a source of drinking water immediately to the Department of Ecology and the Department of Health, Drinking Water Program at the numbers listed below:

Southwest Regional Office	360-407-6300
Department of Health,	360-521-0323 (business hours)
Drinking Water Program	360-481-4901 (after business hours)

2. Twenty-four-hour Reporting

The Permittee must report the following occurrences of noncompliance by telephone, to Ecology at the telephone numbers listed above, within 24-hours from the time the Permittee becomes aware of any of the following circumstances:

- a. Any noncompliance that may endanger health or the environment, unless previously reported under subpart 1, above.
- b. Any unanticipated **bypass** that exceeds any effluent limitation in the permit (See Part S4.B., "Bypass Procedures").
- c. Any **upset** that exceeds any effluent limitation in the permit (See G.15, "Upset").

- d. Any violation of a maximum daily or instantaneous maximum discharge limitation for any of the pollutants in Section S1.A of this permit.
- e. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limitation in the permit.

3. Report Within Five Days

The Permittee must also provide a written submission within five days of the time that the Permittee becomes aware of any event required to be reported under subparts 1 or 2, above. The written submission must contain:

- a. A description of the noncompliance and its cause.
- b. The period of noncompliance, including exact dates and times.
- c. The estimated time noncompliance is expected to continue if it has not been corrected.
- d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- e. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

4. Waiver of Written Reports

Ecology may waive the written report required in subpart 3, above, on a case-by-case basis upon request if a timely oral report has been received.

5. All Other Permit Violation Reporting

The Permittee must report all permit violations, which do not require immediate or within 24-hours reporting, when it submits monitoring reports for S3.A ("Reporting"). The reports must contain the information listed in paragraph E.3, above. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

6. Report Submittal

The Permittee must submit reports to the address listed in S3.

F. Other Reporting

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of Revised Code of Washington (RCW) 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website:

<http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm> .

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to Ecology, it must submit such facts or information promptly.

The Permittee must submit a new application or supplement at least 180 days prior to commencement of discharges, resulting from the activities which may result in permit violations. These activities include: any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

The Permittee must keep a copy of this permit at the facility and make it available upon request to Ecology inspectors.

S4. OPERATION AND MAINTENANCE

The Permittee must, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

The Permittee must schedule any facility maintenance, which might require interruption of wastewater treatment and degrade effluent quality, during non-critical water quality periods and carry this maintenance out in a manner approved by Ecology.

A. Operations and Maintenance Manual

The Permittee must:

1. Prepare an Operations and Maintenance (O&M) Manual in accordance with 173-240-150 WAC and submit it to Ecology for approval postmarked **no later than March 1, 2010**.
2. Review the O&M Manual at least annually and confirm this review by letter to Ecology. The first confirmation letter must be submitted postmarked **no later than January 2, 2011, and annually thereafter**.
3. Revise the O&M Manual to account for the new temperature treatment system and submit it to Ecology for approval postmarked **no later than June 15, 2014**.
4. Submit to Ecology substantial changes or updates to the O&M Manual whenever changes or updates are made.

5. Keep the approved O&M Manual at the permitted facility.
6. Follow the instructions and procedures of this manual.

In addition to the requirements of WAC 173-240-150(1) and (2), the O&M manual must include:

1. Emergency procedures for plant shutdown and cleanup in event of wastewater system upset or failure.
2. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
3. Any directions to maintenance staff when cleaning, or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).
4. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
5. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit
6. Treatment plant process control monitoring schedule.

B. Bypass Procedures

This permit prohibits a bypass which is the intentional diversion of waste streams from any portion of a treatment facility. Ecology may take enforcement action against a Permittee for a bypass unless one of the following circumstances (1, 2, or 3) applies.

1. Bypass for Essential Maintenance without the Potential to Cause Violation of Permit Limits or Conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limits or other conditions of this permit, or adversely impact public health as determined by Ecology prior to the bypass. The Permittee must submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass Which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit.

This bypass is permitted only if:

Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become

inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

No feasible alternatives to the bypass exist, such as:

- The use of auxiliary treatment facilities.
- Retention of untreated wastes.
- Stopping production.
- Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass.
- Transport of untreated wastes to another treatment facility or preventative maintenance), or transport of untreated wastes to another treatment facility.

Ecology is properly notified of the bypass as required in condition S3.E of this permit.

3. If bypass is anticipated and has the potential to result in noncompliance of this permit.
 - a. The Permittee must notify Ecology at least 30 days before the planned date of bypass. The notice must contain:
 - A description of the bypass and its cause.
 - An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
 - A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
 - The minimum and maximum duration of bypass under each alternative.
 - A recommendation as to the preferred alternative for conducting the bypass.
 - The projected date of bypass initiation.
 - A statement of compliance with SEPA.
 - A request for modification of water quality standards as provided for in WAC 173-201A-410, if an exceedance of any water quality standard is anticipated.

- Details of the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.
- b. For probable construction bypasses, the Permittee must notify Ecology of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above during preparation of the engineering report or facilities plan and plans and specifications and must include these to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.
- c. Ecology will consider the following prior to issuing an administrative order for this type of bypass:
- If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
 - If feasible alternatives to bypass exist, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
 - If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. Ecology will give the public an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Ecology will approve a request to bypass by issuing an administrative order under RCW 90.48.120.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

S5. SOLID WASTE

A. Solid Waste Handling

The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee must not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee must apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

C. Solid Waste Control Plan

The Permittee must:

1. Submit a solid waste control plan to Ecology postmarked **no later than March 1, 2010**.
2. Submit to Ecology any proposed revision or modification of the solid waste control plan for review and approval **at least 30 days prior to implementation**.
3. Comply with the plan and any modifications.

The solid waste control plan must:

1. Follow Ecology's guidance for preparing a solid waste control plan (www.ecy.wa.gov/biblio/0710024.html) and address all solid wastes generated by the Permittee.
2. Include at a minimum a description, source, generation rate, and disposal methods of these solid wastes.
3. Not conflict with local or state solid waste regulations.

S6. SPILL PLAN

The Permittee must:

1. Review the Spill Plan at least annually and update the Spill Plan as needed. If updates to the Spill Control Plan are made, the updated Plan must be sent to Ecology **within 30 days of the modification**.
2. If no updates to the Spill Control Plan were made, the Spill Control Plan must be submitted to Ecology postmarked **no later than January 2, 2013**.
3. Follow the plan and any supplements throughout the term of the permit.

The spill control plan must include the following:

1. A list of all oil and petroleum products and other materials used and/or stored on site, which when spilled, or otherwise released into the environment, designate as Dangerous (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-

303-070. Include other materials used and/or stored on site which may become pollutants or cause pollution upon reaching state's waters.

2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
3. A description of the reporting system the Permittee will use to alert responsible managers and legal authorities in the event of a spill.
4. A description of operator training to implement the plan.

The Permittee may submit plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies which meet the intent of this section.

S7. COMPLIANCE SCHEDULE

The Permittee must adhere to the compliance schedule provided below to collect information, conduct evaluations, select and implement the recommended treatment system:

1. Submit a Temperature Study Quality Assurance Project Plan – March 1, 2010
2. Install temperature thermistors and conduct calibration and troubleshooting – March 2, 2010-May 31, 2010
3. Collect temperature monitoring data for evaluation– beginning June 1, 2010
4. Develop an Engineering Report – January 2, 2013-June 30, 2013
5. Submit a Mixing Zone Study Plan (if necessary) – March 1, 2013
6. Develop a Mixing Zone Study Report (if necessary) – April 1, 2013-June 30, 2013
7. Develop Plans and Specifications – July 1, 2013-December 31, 2013
8. Construct the recommended alternative – January 2, 2014-April 30, 2014
9. Trouble-shooting and start-up – May 1, 2014-June 30, 2014
10. Submit a revised O&M Manual to include new treatment system – June 15, 2014

S8. RECEIVING WATER STUDY OF TEMPERATURE

The Permittee must collect information on the effluent and receiving water to determine if the effluent has a reasonable potential to cause a violation of the water quality standards. If reasonable potential exists, Ecology will use this information to calculate effluent limits.

The Permittee must:

- A. Submit a Temperature Monitoring Quality Assurance Project Plan for Ecology review and approval postmarked **no later than March 1, 2010**. B. Conduct all sampling and

analysis in accordance with the guidelines given in *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, Ecology Publication 04-03-030 (<http://www.ecy.wa.gov/pubs/0403030.pdf>).

A model Quality Assurance Plan specific for temperature is available at <http://www.ecy.wa.gov/programs/wq/permits/guidance.html>. C. Measure: (1) the temperature in the Outfall # 002's discharge; and (2) the ambient temperature of the White River in a location that is upstream and unaffected by the temperature of the outfall discharge. Measurement of temperature using the thermistors must begin **no later than May 31, 2010**. D. Use micro-recording temperature devices known as thermistors to measure temperature. Ecology's Quality Assurance Project Plan Development Tool (*Continuous Temperature Sampling Protocols for the Environmental Monitoring and Trends*) contains protocols for continuous temperature sampling. This document is available online at <http://www.ecy.wa.gov/programs/eap/qa/docs/QAPPtool/Mod6%20Ecology%20SOPs/Protocols/ContinuousTemperatureSampling.pdf>.

- E. Calibrate the devices as specified in this document (paragraph D., above) unless using recording devices which are certified by the manufacturer. Ecology does not require manufacture-specific equipment as given in this document however; if the Permittee wishes to use measuring devices from another company, it must demonstrate the accuracy is equivalent.
- F. Set the recording devices to record at one-half-hour intervals.
- G. Report temperature monitoring data as: daily maximum, seven-day running average of the daily maximums, and the monthly maximum of the seven-day running average. The model Quality Assurance Plan shows an example of these calculations.
- H. Use the temperature device manufacturer's software to generate (export) an Excel text file of the temperature data for the calendar year. Send this file and placement logs to Ecology **by December 31 for the monitoring year**. The placement logs should include the following information for both thermistor deployment and retrieval: date, time, temperature device manufacturer ID, location, depth, whether it measured air or water temperature, and any other details that may explain data anomalies. An example of a placement log is shown in Appendix F of the document referenced in item D above.
- I. Submit the temperature data for each month at the time of submittal of the discharge monitoring report.

S9. ENGINEERING DOCUMENTS

- A. The Permittee must prepare and submit two copies of an approvable engineering report in accordance with chapter 173-240 WAC to Ecology for review and approval postmarked **no later than June 30, 2013**. The engineering report must:
 - Include an AKART analysis for temperature.
 - Evaluate the reasonable potential of the discharge to exceed water quality standards for temperature.

- Evaluate alternatives to comply with the temperature water quality standard and provide a recommended alternative for treatment if the discharge demonstrates reasonable potential. Include a recommendation of whether or not a mixing zone study should be done to maintain compliance with temperature criteria.
 - Evaluate and recommend the best location and type of flow meter to measure the discharge at Outfall #002.
- B. The Permittee must prepare and submit two copies of approvable plans and specifications to Ecology for review and approval in accordance with chapter 173-240 WAC postmarked **no later than December 31, 2013**. The plans and specifications may be combined with the Engineering Report provided that it provides sufficient detail to provide a complete understanding of the temperature treatment system and installation the flow meter for Outfall #002.

S10. MIXING STUDY

A. General Requirements

1. The Permittee must determine the degree of effluent and receiving water mixing which occurs within the mixing zone (as defined in permit condition S1.B). The degree of mixing must be determined during critical conditions, as defined in WAC 173-201A-020 Definitions - "Critical Condition," or as close to critical conditions as reasonably possible.
2. The Permittee must use the *Guidance for Conducting Mixing Zone Analyses* (Ecology, 1996) to establish the critical condition scenarios. The Permittee must measure the dilution ratio in the field with dye using study protocols specified in the *Guidance*, Section 5.0 "Conducting a Dye Study," as well as other protocols listed in Subpart C "Protocols." The Permittee may use mixing models as an acceptable alternative or adjunct to a dye study if:
 - a. The critical ambient conditions necessary for model input are known or will be established with field studies.
 - b. If the diffuser is visually inspected for integrity or has been recently tested for performance by the use of tracers.
3. The Permittee must consult the *Guidance* mentioned above when choosing the appropriate model.
4. Ecology requires the use of models if critical condition scenarios that need to be examined are quite different from the set of conditions present during the dye study.
5. The Permittee may need to validate (and possibly calibrate) a model. The Permittee must conduct validation/calibration in accordance with the *Guidance* mentioned above, in particular, Subsection 5.2 "Quantify Dilution." The Permittee must apply the resultant dilution ratios for acute and chronic

boundaries in accordance with directions found in Ecology's *Permit Writer's Manual* (1994), Chapter VI and Appendix 6.

The Permittee must submit a Plan of Study to Ecology **no later than March 1, 2013**, prior to initiation of the effluent mixing study.

B. Reporting Requirements

1. The Permittee must include the results of the effluent mixing study in the Effluent Mixing Report, and must submit it to Ecology for approval **no later than June 30, 2013**.
2. If the Permittee has information on the background physical conditions or background concentration of chemical substances (for which there are criteria in chapter 173-201A WAC) in the receiving water, the Permittee must submit this information to Ecology as part of the Effluent Mixing Report.
3. If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the state water quality standards, chapter 173-201A WAC, Ecology may issue an administrative order to require a reduction of pollutants or modify this permit to impose effluent limits to meet the water quality standards.

The Permittee must locate the outfall and mixing zone boundaries with GPS coordinates. The accuracy of station locations must be identified in the report.

C. Protocols

The Permittee must determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or by another method approved by Ecology:

-Akar, P.J. and G.H. Jirka, *Cormix2: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Multiport Diffuser Discharges*, USEPA Environmental Research Laboratory, Athens, GA, Draft, July 1990.

-Baumgartner, D.J., W.E. Frick, P.J.W. Roberts, and C.A. Bodeen, *Dilution Models for Effluent Discharges*, USEPA, Pacific Ecosystems Branch, Newport, OR, 1993.

-Doneker, R.L. and G.H. Jirka, *Cormix1: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Submerged Single Port Discharges*, USEPA, Environmental Research Laboratory, Athens, GA. EPA/600-3-90/012, 1990.

-Ecology, *Permit Writer's Manual*, Water Quality Program, Department of Ecology, Olympia WA 98504, July 1994, including most current addenda.

-Ecology, *Guidance for Conducting Mixing Zone Analyses*, Permit Writer's Manual, (Appendix 6.1), Water Quality Program, Department of Ecology, Olympia WA 98504, October, 2002.

-Kilpatrick, F.A., and E.D. Cobb, Measurement of Discharge Using Tracers, Chapter A16, *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*, USGS, U.S. Department of the Interior, Reston, VA, 1985.

-Wilson, J.F., E.D. Cobb, and F.A. Kilpatrick, Fluorometric Procedures for Dye Tracing, Chapter A12, *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*, USGS, U.S. Department of the Interior. Reston, VA, 1986.

S11. APPLICATION FOR PERMIT RENEWAL

The Permittee must submit an application for renewal of this permit postmarked **no later than January 2, 2013**.

GENERAL CONDITIONS**G1. SIGNATORY REQUIREMENTS**

- A.** All applications, reports, or information submitted to Ecology must be signed and certified.

- (a) In the case of corporations, by a responsible corporate officer.

For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- (b) In the case of a partnership, by a general partner.

- (c) In the case of sole proprietorship, by the proprietor.

- (d) In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

Applications for permits for domestic wastewater facilities that are either owned or operated by, or under contract to, a public entity shall be submitted by the public entity.

- B.** All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to Ecology.
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

- C.** Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall

operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

- D. Certification. Any person signing a document under this section must make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
- B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.
- C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon Ecology's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

- A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.
 2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 3. A material change in quantity or type of waste disposal.
 4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].
 5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].
 6. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
- B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
1. A material change in the condition of the waters of the state.
 2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
 3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
 4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
 5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.
 6. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
 7. Incorporation of an approved local pretreatment program into a municipality's permit.
- C. The following are causes for modification or alternatively revocation and reissuance:
1. Cause exists for termination for reasons listed in A1 through A7, of this section, and Ecology determines that modification or revocation and reissuance is appropriate.
 2. Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic

transfer (General Condition G7) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

G4. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, but no later than 60 days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: (1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); (2) a significant change in the nature or an increase in quantity of pollutants discharged; or (3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications must be submitted at least 180 days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit must be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to Ecology.

A. Transfers by Modification

Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies Ecology at least 30 days in advance of the proposed transfer date.

2. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.
3. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under the subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G8. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology upon request, copies of records required to be kept by this permit.

G11. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by Ecology.

G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof will be punished by a fine of up to \$10,000 and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs is a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit must incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to \$10,000 for every such violation. Each and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

G15. UPSET

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limits if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: (1) an upset occurred and that the Permittee can identify the cause(s) of the upset; (2) the permitted facility was being properly operated at the time of the upset; (3) the Permittee submitted notice of the upset as required in condition S3.E; and (4) the Permittee complied with any remedial measures required under S4.C of this permit.

In any enforcement proceedings the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G17. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit will, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment

will be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.

G20. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify Ecology as soon as they know or have reason to believe:

- A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
 - 1. One hundred micrograms per liter (100 µg/L).
 - 2. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
 - 3. Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - 4. The level established by the Director in accordance with 40 CFR 122.44(f).
- B. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
 - 1. Five hundred micrograms per liter (500µg/L).
 - 2. One milligram per liter (1 mg/L) for antimony.
 - 3. Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - 4. The level established by the Director in accordance with 40 CFR 122.44(f).

G21. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

APPENDIX A EFFLUENT CHARACTERIZATION FOR POLLUTANTS

Note: This list includes EPA required pollutants (priority pollutants) and some Ecology priority toxic chemicals (PBTs)

The following table with analytical methods and levels is to be used for effluent characterization in NPDES and State Waste Discharge permit applications, applications for permit renewal, and monitoring required by permit. This attachment is used in conjunction with Section V, Parts A, B, and C of EPA Application Form 2C, Parts A.12, B.6, and D of EPA application form 2A and with State applications. This attachment specifies effluent characterization requirements of the Department of Ecology. The data should be compiled from last year's data if it is a parameter routinely measured. If you are a primary industry category with effluent guidelines you may have some mandatory testing requirements (see Table 2C-2 of Form 2C). If you are a municipal POTW you also have some mandatory testing requirements which are dependent upon the design flow (see EPA form 2A).

The permit applications will specify the groups of compounds to be analyzed. Ecology may require additional pollutants to be analyzed within a group. The objectives are to reduce the number of analytical "non-detects" in applications and to measure effluent concentrations near or below criteria values where possible at a reasonable cost. If an applicant or Permittee knows that an alternate, less sensitive method (higher DL and QL) from 40 CFR Part 136 is sufficient to produce measurable results in their effluent, that method may be used for analysis.

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ² µg/L unless specified	Quantitation Level (QL) ³ µg/L unless specified
CONVENTIONALS			
Biochemical Oxygen Demand	SM5210-B		2 mg/L
Chemical Oxygen Demand	SM5220-D		10 mg/L
Total Organic Carbon	SM5310-B/C/D		1 mg/L
Total Suspended Solids	SM2540-D		5 mg/L
Total Ammonia (as N)	SM4500-NH3- GH		0.3 mg/L
Flow	Calibrated device		
Dissolved oxygen	4500-OC/OG		0.2 mg/L
Temperature (max. 7-day avg.)	Analog recorder or Use micro-recording devices known as thermistors		0.2 °C
pH	SM4500-H ⁺ B	N/A	N/A
NONCONVENTIONALS			
Total Alkalinity	SM2320-B		5 mg/L as CaCO ₃
Bromide (24959-67-9)	4110 B	100	400
Chlorine, Total Residual	4500 Cl G		50.0
Color	SM2120 B/C/E		10 color unit
Fecal Coliform	SM 9221E	N/A	N/A
Fluoride (16984-48-8)	SM4500-F E	25	100
Nitrate-Nitrite (as N)	4500-NO3- E/F/H		100
Nitrogen, Total Kjeldahl (as N)	4500-NH3-C/E/FG		300
Ortho-Phosphate (PO ₄ as P)	4500- PE/PF	30	100
Phosphorus, Total (as P)	4500-PE/PF	30	100
Oil and Grease (HEM)	1664A		5,000
Radioactivity	Table 1E		
Salinity	SM2520-B		3 PSS

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ² µg/L unless specified	Quantitation Level (QL) ³ µg/L unless specified
Settleable Solids	SM2540 -F		100
Sulfate (as mg/L SO ₄)	SM4110-B		200
Sulfide (as mg/L S)	4500-S ² F/D/E/G		200
Sulfite (as mg/L SO ₃)	SM4500-SO3B		2000
Surfactants	SM5540 C		50
Total dissolved solids	SM2540 C		20 mg/L
Total Hardness	2340B		200 as CaCO ₃
Aluminum, Total (7429-90-5)	200.8	2.0	10
Barium Total (7440-39-3)	200.8	0.5	2.0
Boron Total (7440-42-8)	200.8	2.0	10.0
Cobalt, Total (7440-48-4)	200.8	0.05	0.25
Iron, Total (7439-89-6)	200.8	12.5	50
Magnesium, Total (7439-95-4)	200.8	10	50
Molybdenum, Total (7439-98-7)	200.8	0.1	0.5
Manganese, Total (7439-96-5)	200.8	0.1	0.5
Tin, Total (7440-31-5)	200.8	0.3	1.5
Titanium, Total (7440-32-6)	200.8	0.5	2.5
METALS, CYANIDE & TOTAL PHENOLS			
Antimony, Total (7440-36-0)	200.8	0.3	1.0
Arsenic, Total (7440-38-2)	200.8	0.1	0.5
Beryllium, Total (7440-41-7)	200.8	0.1	0.5
Cadmium, Total (7440-43-9)	200.8	0.05	0.25
Chromium (hex) dissolved (185-402-99)	SM3500-Cr EC	0.3	1.2
Chromium, Total (7440-47-3)	200.8	0.2	1.0
Copper, Total (7440-50-8)	200.8	0.4	2.0
Lead, Total (7439-92-1)	200.8	0.1	0.5
Mercury, Total (7439-97-6)	1631E	0.0002	0.0005
Nickel, Total (7440-02-0)	200.8	0.1	0.5
Selenium, Total (7782-49-2)	200.8	1.0	1.0
Silver, Total (7440-22-4)	200.8	0.04	0.2
Thallium, Total (7440-28-0)	200.8	0.09	0.36
Zinc, Total (7440-66-6)	200.8	0.5	2.5
Cyanide, Total (7440-66-6)	335.4	5	10
Cyanide, Available	SM4500-CN G	5	10
Phenols, Total	EPA 420.1		50
DIOXIN			
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (176-40-16)	1613B	1.3 pg/L	5 pg/L
VOLATILE COMPOUNDS			
Acrolein (107-02-8)	624	5	10
Acrylonitrile (107-13-1)	624	1.0	2.0
Benzene (71-43-2)	624	1.0	2.0
Bis(2-Chloroethyl)ether (111-44-4)	611/625	1.0	2.0
Bis(2-Chloroisopropyl) ether (108-60-1)	611/625	1.0	2.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ² µg/L unless specified	Quantitation Level (QL) ³ µg/L unless specified
Bromoform (75-25-2)	624	1.0	2.0
Carbon tetrachloride (108-90-7)	624/601 or SM6230B	1.0	2.0
Chlorobenzene (108-90-7)	624	1.0	2.0
Chloroethane (75-00-3)	624/601	1.0	2.0
2-Chloroethylvinyl Ether (110-75-8)	624	1.0	2.0
Chloroform (67-66-3)	624 or SM6210B	1.0	2.0
Dibromochloromethane (124-48-1)	624	1.0	2.0
1,2-Dichlorobenzene (95-50-1)	624	1.9	7.6
1,3-Dichlorobenzene (541-73-1)	624	1.9	7.6
1,4-Dichlorobenzene (106-46-7)	624	4.4	17.6
3,3'-Dichlorobenzidine (91-94-1)	605/625	0.5	1.0
Dichlorobromomethane (75-27-4)	624	1.0	2.0
1,1-Dichloroethane (75-34-3)	624	1.0	2.0
1,2-Dichloroethane (107-06-2)	624	1.0	2.0
1,1-Dichloroethylene (75-35-4)	624	1.0	2.0
1,2-Dichloropropane (78-87-5)	624	1.0	2.0
1,3-dichloropropylene (mixed isomers) (542-75-6)	624	1.0	2.0
Ethylbenzene (100-41-4)	624	1.0	2.0
Methyl bromide (74-83-9) (Bromomethane)	624/601	5.0	10.0
Methyl chloride (74-87-3) (Chloromethane)	624	1.0	2.0
Methylene chloride (75-09-2)	624	5.0	10.0
1,1,2,2-Tetrachloroethane (79-34-5)	624	1.9	2.0
Tetrachloroethylene (127-18-4)	624	1.0	2.0
Toulene (108-88-3)	624	1.0	2.0
1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride)	624	1.0	2.0
1,1,1-Trichloroethane (71-55-6)	624	1.0	2.0
1,1,2-Trichloroethane (79-00-5)	624	1.0	2.0
Trichloroethylene (79-01-6)	624	1.0	2.0
Vinyl chloride (75-01-4)	624/SM6200B	1.0	2.0
ACID COMPOUNDS			
2-Chlorophenol (95-57-8)	625	1.0	2.0
2,4-Dichlorophenol (120-83-2)	625	0.5	1.0
2,4-Dimethylphenol (105-67-9)	625	0.5	1.0
4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol)	625/1625B	1.0	2.0
2,4 dinitrophenol (51-28-5)	625	1.0	2.0
2-Nitrophenol (88-75-5)	625	0.5	1.0
4-nitrophenol (100-02-7)	625	0.5	1.0
Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol)	625	1.0	2.0
Pentachlorophenol (87-86-5)	625	0.5	1.0 ¹⁰

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ² µg/L unless specified	Quantitation Level (QL) ³ µg/L unless specified
Phenol (108-95-2)	625	2.0	4.0
2,4,6-Trichlorophenol (88-06-2)	625	2.0	4.0
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Acenaphthene (83-32-9)	625	0.2	0.4
Acenaphthylene (208-96-8)	625	0.3	0.6
Anthracene (120-12-7)	625	0.3	0.6
Benzidine (92-87-5)	625	12	24
Benzyl butyl phthalate (85-68-7)	625	0.3	0.6
Benzo(a)anthracene (56-55-3)	625	0.3	0.6
Benzo(j)fluoranthene (205-82-3)	625	0.5	1.0
Benzo(r,s,t)pentaphene (189-55-9)	625	0.5	1.0
Benzo(a)pyrene (50-32-8)	610/625	0.5	1.0
3,4-benzofluoranthene (Benzo(b)fluoranthene) (205-99-2)	610/625	0.8	1.6
11,12-benzofluoranthene (Benzo(k)fluoranthene) (207-08-9)	610/625	0.8	1.6
Benzo(ghi)Perylene (191-24-2)	610/625	0.5	1.0
Bis(2-chloroethoxy)methane (111-91-1)	625	5.3	21.2
Bis(2-chloroethyl)ether (111-44-4)	611/625	0.3	1.0
Bis(2-chloroisopropyl)ether (108-60-1)	625	0.3	0.6
Bis(2-ethylhexyl)phthalate (117-81-7)	625	0.1	0.5
4-Bromophenyl phenyl ether (101-55-3)	625	0.2	0.4
2-Chloronaphthalene (91-58-7)	625	0.3	0.6
4-Chlorophenyl phenyl ether (7005-72-3)	625	0.3	0.5
Chrysene (218-01-9)	610/625	0.3	0.6
Dibenzo (a,j)acridine (224-42-0)	610M/625M	2.5	10.0
Dibenzo (a,h)acridine (226-36-8)	610M/625M	2.5	10.0
Dibenzo(a-h)anthracene (53-70-3)(1,2,5,6-dibenzanthracene)	625	0.8	1.6
Dibenzo(a,e)pyrene (192-65-4)	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene (189-64-0)	625M	2.5	10.0
3,3'-Dichlorobenzidine (91-94-1)	605/625	0.5	1.0
Diethyl phthalate (84-66-2)	625	1.9	7.6
Dimethyl phthalate (131-11-3)	625	1.6	6.4
Di-n-butyl phthalate (84-74-2)	625	0.5	1.0
2,4-dinitrotoluene (121-14-2)	609/625	0.2	0.4
2,6-dinitrotoluene (606-20-2)	609/625	0.2	0.4
Di-n-octyl phthalate (117-84-0)	625	0.3	0.6
1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	1625B	5.0	20
Fluoranthene (206-44-0)	625	0.3	0.6
Fluorene (86-73-7)	625	0.3	0.6
Hexachlorobenzene (118-74-1)	612/625	0.3	0.6
Hexachlorobutadiene (87-68-3)	625	0.5	1.0
Hexachlorocyclopentadiene (77-47-4)	1625B/625	0.5	1.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ² µg/L unless specified	Quantitation Level (QL) ³ µg/L unless specified
Hexachloroethane (67-72-1)	625	0.5	1.0
Indeno(1,2,3-cd)Pyrene (193-39-5)	610/625	0.5	1.0
Isophorone (78-59-1)	625	0.5	1.0
3-Methyl cholanthrene (56-49-5)	625	2.0	8.0
Naphthalene (91-20-3)	625	0.3	0.6
Nitrobenzene (98-95-3)	625	0.5	1.0
N-Nitrosodimethylamine (62-75-9)	607/625	2.0	4.0
N-Nitrosodi-n-propylamine (621-64-7)	607/625	0.5	1.0
N-Nitrosodiphenylamine (86-30-6)	625	0.5	1.0
Perylene (198-55-0)	625	1.9	7.6
Phenanthrene (85-01-8)	625	0.3	0.6
Pyrene (129-00-0)	625	0.3	0.6
1,2,4-Trichlorobenzene (120-82-1)	625	0.3	0.6
PESTICIDES/PCBs			
Aldrin (309-00-2)	608	0.025	0.05
alpha-BHC (319-84-6)	608	0.025	0.05
beta-BHC (319-85-7)	608	0.025	0.05
gamma-BHC (58-89-9)	608	0.025	0.05
delta-BHC (319-86-8)	608	0.025	0.05
Chlordane (57-74-9)	608	0.025	0.05
4,4'-DDT (50-29-3)	608	0.025	0.05
4,4'-DDE (72-55-9)	608	0.025	0.05 ¹⁰
4,4' DDD (72-54-8)	608	0.025	0.05
Dieldrin (60-57-1)	608	0.025	0.05
alpha-Endosulfan (959-98-8)	608	0.025	0.05
beta-Endosulfan (33213-65-9)	608	0.025	0.05
Endosulfan Sulfate (1031-07-8)	608	0.025	0.05
Endrin (72-20-8)	608	0.025	0.05
Endrin Aldehyde (7421-93-4)	608	0.025	0.05
Heptachlor (76-44-8)	608	0.025	0.05
Heptachlor Epoxide (1024-57-3)	608	0.025	0.05
PCB-1242 (53469-21-9)	608	0.25	0.5
PCB-1254 (11097-69-1)	608	0.25	0.5
PCB-1221 (11104-28-2)	608	0.25	0.5
PCB-1232 (11141-16-5)	608	0.25	0.5
PCB-1248 (12672-29-6)	608	0.25	0.5
PCB-1260 (11096-82-5)	608	0.13	0.5
PCB-1016 (12674-11-2)	608	0.13	0.5
Toxaphene (8001-35-2)	608	0.24	0.5

1. An X placed in this box means you must analyze for all pollutants in the group.
2. Detection level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99 percent confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

3. Quantitation Level (QL) is equivalent to EPA's Minimum Level (ML) which is defined in 40 CFR Part 136 as the minimum level at which the entire GC/MS system must give recognizable mass spectra (background corrected) and acceptable calibration points. These levels were published as proposed in the Federal Register on March 28, 1997.